REMARKS/ARGUMENTS

Reconsideration of the application is requested.

Claims 1-19 remain in the application. Claims 1, 6, and 11 have been amended.

The claims have been amended to clarify and emphasize their distinction from the prior art and overcome the rejections.

As stated in the specification at page 8, lines 10-20, page 16, lines 4-20 and in the working examples, and claimed in claims 1, 2, and 6, the present invention provides a baking mixture such as batter or dough for baking heat-deformable and in fact heat-deformed non-perishable baked goods characterized by a diminished level of sweet taste made from flours and/or starches and having certain physical properties.

35 U.S.C. § 112

Claims 1-19 have been rejected under 35 U.S.C. § 112 first paragraph for not teaching "a major proportion" as it relates to flour and/or starches in the specification, and under 35 U.S.C. § 112 second paragraph as not clear what is encompassed by that phrase.

PAGE 7/20 * RCVD AT 12/23/2003 12:09:59 PM [Eastern Standard Time] * SVR:USPTO-EFXRF-1/1 * DNIS:8729306 * CSID:+9549251101 * DURATION (mm-ss):03-48

It is respectfully pointed out that inspection of the formulas contained in the Working Examples and simple calculation shows that all the formulas in fact contain on a water-free basis a major proportion of flour and/or starches as the phrase is commonly understood, that is a proportion greater than 50% by weight.

In the interest of concluding prosecution, however, the claims have been amended to further clarify that "made from flours and/or starches" means that flours and/or starches are present in a proportion of at least 63.8% by weight excluding water, as shown by the formulas in the Working Examples that illustrate the invention, where the lowest proportion of flour and/or starch, in formula 8 of Example 1, is calculated as 63.82% by weight of all ingredients except water. Formulas 1 and 41 which show a lower percent (59.2%) of flour/starch are comparative examples not illustrating the invention, identified as such by the notation "comp." at the bottom of the relevant column in the table.

It is respectfully submitted that any remaining questions relating to 35 U.S.C. § 112 are best resolved by telephone contact of the Examiner with the undersigned.

PAGE 8/20 * RCVD AT 12/23/2003 12:09:59 PM [Eastern Standard Time] * SVR:USPTO-EFXRF-1/1 * DNIS:8729306 * CSID:+9549251101 * DURATION (mm-ss):03-48

35 U.S.C. § 103

Claims 1-19 have been rejected as unpatentable over Kim and Kondo.

It is acknowledged that the claims differ as to the specific type of baked product and the amounts used, and that Kim discloses a product that becomes soft quickly.

The rejection is respectfully traversed, for failing to consider the invention as a whole and to consider the cited art as a whole. Those skilled in the art not having knowledge of the present invention clearly have no basis for abstracting certain bits of disclosure from one reference and other bits of disclosure from the other reference where significant aspects of the references contradict one another. Those skilled in the art not having knowledge of the present invention also have no basis to arrive at elements of the invention not taught by either reference.

Thus, neither Kim nor Kondo disclose a product made of flours and/or starches in a major proportion of at least 63.8% by weight excluding water. Such a product is contrary to the specific teaching of Kim and would defeat Kim's purpose of suitability for diabetics.

PAGE 9/20 * RCVD AT 12/23/2003 12:09:59 PM [Eastern Standard Time] * SVR:USPTO-EFXRF-1/1 * DNIS:8729306 * CSID:+9549251101 * DURATION (mm-ss):03-48

Kim, in total contrast, discloses a baking composition in which, to provide physiological acceptability for diabetics, the content of digestible carbohydrate, is 10% maximum, and the content of flour and/or starch is 15% maximum.

The physical properties of the claimed product, differing from Kim's disclosure, include in particular a plastic state at an elevated temperature that facilitates processing, a diminished level of sweet taste, and a crispy and brittle texture at ambient temperature. No baking mixture or resulting baked product having these properties are disclosed by Kim. The Examiner acknowledges this, noting that "Kim discloses that the product becomes soft quickly."

It is respectfully pointed out that a product that does not remain crispy until it reaches the consumer after the time required to pass through the customary commercial distribution channels is not a crispy product and hence is not the claimed product. However, the claims also require a glass transition temperature above room temperature, which is a readily ascertainable quantitative measure of brittleness. No such property is disclosed by Kim or by Kondo.

Kondo discloses a mixture of saccharides composed of 25-75 wt. % meso-erythritol and 75-25% wt. % at least one saccharide

PAGE 10/20 * RCVD AT 12/23/2003 12:09:59 PM [Eastern Standard Time] * SVR:USPTO-EFXRF-1/1 * DNIS:8729306 * CSID:+9549251101 * DURATION (mm-ss):03-48

selected from sugar and sugaralcohol other than meso-erythritol used as edulcorant in a kneaded powder cake.

The present invention requires the claimed bakery mixtures to have the property of being deformable in a heated plastic state and the resulting baked products to have been so deformed. No such deformable baking mixture or resulting baked product having been deformed are disclosed by Kim or by Kondo.

A totally unexpected property and consumer benefit of the product of the present invention is the reduced level of sweetness, opening the way to products with a neutral taste (see claim 17). Kim and Kondo use xylitol and erythritol to replace sugar because they are sweet. Note in this connection Kim's statement that

> the caloric value of lactitol amounts only to maximally half of that of saccharose so that in diabetic products this sugar alcohol is preferred to sorbitol and xylitol both having the same caloric value as saccharose.

Having the same caloric value as saccharose (sugar), xylitol might be expected to provide approximately equal sweetness. A totally unexpected property of xylitol and erythritol in bakery products, not taught or suggested by either Kim or Kondo but discovered by the present inventors, is their great

PAGE 11/20 * RCVD AT 12/23/2003 12:09:59 PM [Eastern Standard Time] * SVR:USPTO-EFXRF-1/1 * DNIS:8729306 * CSID:+9549251101 * DURATION (mm-ss):03-48

efficiency as plasticizers in facilitating the elevated temperature processing of the products at a greatly reduced use level, such that one part by weight of these polyols can replace 2-3 parts by weight of sugar (see specification at page 15 lines 18-25).

The rejection acknowledges that the claims differ as to the specific type of baked product and the amounts used, but states that "Kim discloses all bakery products (see claim 1), where bakery products would include wafers."

In taking this position, the rejection overlooks the fact that Kim only discloses all bakery products, including wafers, having Kim's disclosed composition. Here, it remains indisputable that Kim provides no disclosure, teaching, or suggestion of any bakery product having the property required according to the present invention of being deformable in a heated plastic state. Kondo likewise provides no such disclosure, teaching or suggestion. Hence one skilled in the art on the priority date of this invention seeking knowledge of a baking mixture and resulting bakery product having the property of being deformable in a heated plastic state finds no assistance in Kim, in Kondo, or in both references considered together.

PAGE 12/20 * RCVD AT 12/23/2003 12:09:59 PM [Eastern Standard Time] * SVR:USPTO-EFXRF-1/1 * DNIS:8729306 * CSID:+9549251101 * DURATION (mm-ss):03-48

A further distinction of the present invention is achieving the claimed property of having a brittle and crispy texture at room temperature and a glass transition temperature above room temperature. This property is not disclosed, taught or suggested by either of the cited references Kim and Kondo or their combination, and furthermore Kim discloses that bakery products with the claimed property according to the present invention of having a brittle and crispy texture can not be prepared with xylitol. Hence the present invention defines a patentably distinct and unobvious bakery mixture and resulting bakery product having properties not taught or suggested by the prior art.

It may be helpful to consider how the invention claimed in each of the independent claims differs from the teachings of the prior art, as follows:

Thus, the baking mixture of claim 1 is defined as a baking mixture for baking non-perishable baked goods made from flours and/or starches, the proportion of flours and/or starches being at least 63.8 per cent by weight of said mixture excluding water, said baked goods having been deformed after the baking step in the still plastic state or in the state which has become plastic again by reheating, comprising

PAGE 13/20 * RCVD AT 12/23/2003 12:09:59 PM [Eastern Standard Time] * SVR:USPTO-EFXRF-1/1 * DNIS:8729306 * CSID:+9549251101 * DURATION (mm-ss):03-48

erythritol and/or xylitol as partial or complete sugar replacement, the content of erythritol and/or xylitol when the sugar is completely replaced being from 12 to 55% by weight, based on the total of flour and starch.

With respect to the composition being made from flour and/or starches in the proportion defined, the contrast with Kim's teaching is dramatic: in Kim, flour and/or starches are limited to 15% maximum and even the combined total of flour/starch and "digestible carbohydrate" is only 25%.

Kondo teaches a range of 25% to 75% for the proportions of sugar and erythritol to each other, and hence provides no teaching whatsoever about a product with 0% sugar. Kondo also discloses no proportion of flour and/or starch. Hence nothing in Kondo provides any encouragement to one skilled in the art not knowing the present invention to disregard Kim's explicit limitation.

With respect to erythritol and/or xylitol as partial replacement of sugar, it should be noted that this is contrary to the teaching of Kim since Kim only discloses compositions with 0% sugar.

PAGE 14/20 * RCVD AT 12/23/2003 12:09:59 PM [Eastern Standard Time] * SVR:USPTO-EFXRF-1/1 * DNIS:8729306 * CSID:+9549251101 * DURATION (mm-ss):03-48

With respect to erythritol and/or xylitol as complete replacement of sugar in compositions made with flour and/or starch according to the invention, it should be noted that the amount of erythritol and/or xylitol is specified as ranging from 12% to 55% by weight of the total of flour and starch. It is an amount of erythritol and/or xylitol within this range that affords the novel and unobvious property of being deformable in a heated plastic state of the baked product.

Amounts of erythritol and/or xylitol outside of the specified range do not afford this property. Other polyhydric alcohols such as sorbitol and maltitol do not afford this property in any amount. In this connection, the Examiner's attention is respectfully directed to formulas 20 and 28 of the Working Examples, where the amount of polyol at 10% by weight of flour and starch is less than the claimed minimum, and hot rolling of the baked product was unsuccessful.

Since neither Kim nor Kondo disclose, teach, or suggest a baking mixture or resulting product with the property of being deformable in a heated plastic state of the baked product, the finding that this property is only achieved with certain polyols in specified amounts, and not with other amounts of the same polyols or with other polyols, is clearly an unexpected result.

PAGE 15/20 * RCVD AT 12/23/2003 12:09:59 PM [Eastern Standard Time] * SVR:USPTO-EFXRF-1/1 * DNIS:8729306 * CSID:+9549251101 * DURATION (mm-ss):03-48

The baking mixture of claim 6 is defined as a baking mixture for baking non-perishable baked goods made from flours and/or starches, the proportion of flours and/or starches being at least 63.8 per cent by weight of said mixture excluding water, said baked goods having been deformed at an elevated temperature and characterized by a brittle and crispy texture at room temperature, a glass transition temperature above room temperature, and a diminished level of sweetness, comprising, in weight per cent of the total quantity of flour and starch,

70-150% of water,

0 - 63.1% of a sugar,

and an effective plasticizing amount of at least one aliphatic polyol having four to five carbon atoms and an alcoholic hydroxyl group linked to each carbon atom.

In claim 6, the elements of being made from flour and/or starch in defined proportion and of affording baked products deformable in a heated plastic state are as in claim 1, and need no further discussion here.

Claim 6 further requires the mixture to afford baked products characterized by a brittle and crispy texture at room

PAGE 16/20 * RCVD AT 12/23/2003 12:09:59 PM [Eastern Standard Time] * SVR:USPTO-EFXRF-1/1 * DNIS:8729306 * CSID:+9549251101 * DURATION (mm-ss):03-48

temperature and a glass transition temperature above room temperature, and a diminished level of sweetness.

Claim 6 does not numerically specify the quantity of aliphatic polyol ingredient, but requires an effective plasticizing amount, that is a sufficient quantity to achieve the effect of the baked product being deformable in a heated state and also having a brittle and crispy texture at room temperature. The claimed aliphatic polyol having four to five carbon atoms and an alcoholic hydroxyl group linked to each carbon atom encompasses erythritol (four carbon atoms) and xylitol (five carbon atoms).

Kim explicitly discloses that sorbitol and xylitol used in the disclosed composition failed to give crispy products, while Kondo is devoid of disclosure of any crispy product. Kim also discloses a crispy product containing lactitol, which is a sugar alcohol with twelve carbon atoms and ten hydroxyl groups.

Accordingly, the ability to obtain a crispy product with xylitol in the composition of claim 6 is directly contrary to the teaching of Kim and thus clearly an unexpected result. The

PAGE 17/20 * RCVD AT 12/23/2003 12:09:59 PM [Eastern Standard Time] * SVR:USPTO-EFXRF-1/1 * DNIS:8729306 * CSID:+9549251101 * DURATION (mm-ss):03-48

ability to obtain a crispy product with erythritol is also unexpected, because like xylitol, which constituted a failure for Kim, and unlike Kim's successful lactitol, erythritol has a hydroxyl group on each carbon atom, and even fewer carbon atoms (4). One skilled in the art aware of Kim would most likely expect erythritol to fail in Kim's composition.

It should also be noted that the diminished level of sweetness is also an unobvious feature of the invention, not taught by Kim or Kondo or their combination. On the contrary, Kim emphasizes the sweet taste of the preferred lactitol ingredient, while Kondo characterizes the disclosed saccharide mixture as "edulcorant" (= sweetener) to achieve "a feeling of quality as well as using wholly cane sugar" (i.e. a product of similar sweetness).

The baked product of claim 11 is defined as non-perishable baked goods made from flours and/or starches, the proportion of flours and/or starches being at least 63.8 per cent by weight of said baked goods excluding water, said baked goods having been deformed at an elevated temperature and characterized by a brittle and crispy texture at room temperature, a glass transition temperature above room temperature, and a diminished level of sweetness, comprising, in weight per cent of the total quantity of flour and starch,

PAGE 18/20 * RCVD AT 12/23/2003 12:09:59 PM [Eastern Standard Time] * SVR:USPTO-EFXRF-1/1 * DNIS:8729306 * CSID:+9549251101 * DURATION (mm-ss):03-48

water in an amount not exceeding 10%,

0 - 63.1% of a sugar,

and an effective plasticizing amount of at least one aliphatic polyol having four to five carbon atoms and an alcoholic hydroxyl group linked to each carbon atom.

It can be seen that except for the diminished water content as a result of being baked, the composition closely parallels that of claim 6, and the differences from the teachings of the prior given above for claim 6 are to be applied here without being repeated verbatim.

Among the dependent claims, the Examiner's attention is respectfully directed to claim 17, dependent upon claim 11 by way of claim 13 and defining a baked product according to the invention having a neutral taste. Nothing in Kim, in Kondo, or in any combination of these references provides even the slightest hint of such a product.

The rejection again seeks support in *In re Boesch*, *In re Kerkhoven* and *In re Gershon* for the contention that "the claims are drawn to a combination of known components which produces expected results." On the contrary, it is

PAGE 19/20 * RCVD AT 12/23/2003 12:09:59 PM [Eastern Standard Time] * SVR:USPTO-EFXRF-1/1 * DNIS:8729306 * CSID:+9549251101 * DURATION (mm-ss):03-48

respectfully submitted that the claims are drawn to a novel combination that produces unexpected results, as detailed above.

The Examiner's attention is respectfully called to an earlier amendment for an analysis of the cited cases and an explanation how the claimed invention differs significantly from the facts considered by the Court in rejecting the claims presented in each of these cases. That analysis and explanation are believed to be fully applicable to the present claims, and the Examiner is respectfully urged to consider it as if here reiterated verbatim.

As explained above, it is respectfully submitted that claims 1-19 define patentable subject matter and are in order for prompt allowance, which is respectfully solicited.

Respectfully submitted,

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PAGE 20/20 * RCVD AT 12/23/2003 12:09:59 PM [Eastern Standard Time] * SVR:USPTO-EFXRF-1/1 * DNIS:8729306 * CSID:+9549251101 * DURATION (mm-ss):03-48